

Additional file 1. Literature searches.

Searches for literature in English					
Main searches in publication databases	Date	No. of hits	Type of search	Search string	Comments
Academic Search Premier	10 Dec. 2012	1,441	Abstract	(lake* OR reservoir* OR pond* OR fresh#water) AND (*manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pike#perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
Agricola	12 Dec. 2012	753	Keywords anywhere	(lake? reservoir? pond? freshwater fresh-water) AND (manipulat? biomanipulat? remov? restor? stock? introduc? reduc? addition) AND (planktivor? zooplanktivor? benthivor? cyprinid? piscivor? Rutilus Abramis Esox Perca Stizostedion Micropterus Dorosoma Coregonus Oncorhynchus Salmo)	
Biological Abstracts	12 Dec. 2012	2,936	All fields	(lake* OR reservoir* OR pond* OR freshwater OR fresh-water) AND (manipulat* OR biomanipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (planktivor* OR zooplanktivor* OR benthivor* OR zoobenthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pikeperch OR pike-perch OR zander OR sander OR "smallmouth bass" OR "largemouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	Articles from 1993 to 2002 available through Stockholm University.
BioOne	14 Dec. 2012	181	Abstract	(lake* OR reservoir* OR pond* OR freshwater OR fresh-water) AND (manipulat* OR biomanipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (planktivor* OR zooplanktivor* OR benthivor* OR zoobenthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pikeperch OR pike-perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
COPAC	14 Dec. 2012	16	Keywords	biomanipulation AND lake AND fish	Restricted search options, OR not allowed.
GeoBASE + GeoRef (Engineering Village)	12 Dec. 2012	3,713	Subject/ Title/ Abstract	(lake* OR reservoir* OR pond* OR freshwater OR fresh-water) AND (biomanipulat* OR manipulate OR remove OR restore OR stock OR introduce OR reduce OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo)	Autostemming On; search string simplified since full search resulted in system error.
IngentaConnect	14 Dec. 2012	548	Title, keywords or abstract	(lake* OR reservoir* OR pond*) AND (biomanipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc*) AND (planktivor* OR benthivor* OR cyprinid* OR piscivor* OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Dorosoma)	Search string simplified due to restrictions.
JSTOR	12 Dec. 2012	331	Abstracts	(lake& OR reservoir& OR pond& OR freshwater OR fresh-water) AND (biomanipulate# OR manipulate# OR remove# OR restore# OR stock# OR introduce# OR reduce# OR addition) AND (planktivor* OR benthivor* OR cyprinid& OR piscivor* OR "predatory fish" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo)	Search string simplified due to restrictions.

Main searches in publication databases (continued)	Date	No. of hits	Type of search	Search string	Comments
Scopus	12 Dec. 2012	6,305	Title, abstract, keywords	(lake* OR reservoir* OR pond* OR fresh*water) AND (biomanipulat* OR manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (zooplanktivor* OR planktivor* OR zoobenthivor* OR benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pike*perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
SwePub	14 Dec. 2012	173	Fritext	(lake* OR reservoir* OR pond* OR freshwater OR fresh-water) AND (manipulat* OR biomanipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (planktivor* OR zooplanktivor* OR benthivor* OR zoobenthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pikeperch OR pike-perch OR zander OR sander OR "smallmouth bass" OR "largemouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
Web of Science	10 Dec. 2012	6,404	Topics	(lake* OR reservoir* OR pond* OR fresh\$water) AND (*manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pike\$perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
Wiley Online Library	12 Dec. 2012	831	Abstract	(lake* OR reservoir* OR pond* OR fres*water) AND (*manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pik*perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	
Supplementary searches with main search string in publication databases	Date	No. of hits in addition to those already found	Type of search	Search string	Comments
Aquatic Sciences and Fisheries Abstracts	10 Jan. 2013	1,905	Abstracts	(lake* OR reservoir* OR pond* OR fresh*water) AND (*manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR uskellunge OR perch OR pike*perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	The following classifications were excluded: Fish culture, Freshwater pollution, Effects of Pollution, Species interactions: parasites and diseases, Population genetics, Behaviour, Physiology, biochemistry, biophysics, Migrations and rhythms, Diseases of Cultured Organisms, Aquaculture: General, Genetics and evolution, Taxonomy and morphology. Considerable technical problems with the export.
Directory of Open Access Journals (DOAJ)	10 Jan. 2013	5	All fields	(biomanipulation OR biomanipulated) AND (planktivorous OR planktivore OR benthivorous OR benthivore OR piscivorous OR piscivore OR cyprinid OR fish)	Search options very restricted (only two terms allowed, no wildcards). Multiple searches were made, together equivalent to the search string at left.
SpringerLink	10 Jan. 2013	0	Title & abstract	(biomanipulation OR biomanipulated) AND (planktivorous OR benthivorous OR piscivorous)	The old version of the database was used, since the new one allowed only full-text searches. Search options restricted, wildcards did not work.

Searches with complementary search string in publication databases	Date	No. of hits	Type of search	Search string	Comments
Academic Search Premier	14 Jan. 2013	348	Abstract	(lake* OR reservoir* OR pond* OR fresh#water) AND fish* AND (trophic OR cascad* OR food#web OR top#down OR bottom#up OR resuspen* OR "stable state*" OR bistable OR "regime shift*") AND (water#quality OR transparency OR clarity OR turbid* OR secchi OR "suspended solids" OR phosph* OR nitrogen OR oxygen OR chlorophyll OR phytoplankton OR "plankton flora")	
Aquatic Sciences and Fisheries Abstracts	14 Jan. 2013	1,167	Abstracts	(lake* OR reservoir* OR pond* OR fresh*water) AND fish* AND (trophic OR cascad* OR food*web OR top*down OR bottom*up OR resuspen* OR "stable state*" OR bistable OR "regime shift*") AND (water*quality OR transparency OR clarity OR turbid* OR secchi OR "suspended solids" OR phosph* OR nitrogen OR oxygen OR chlorophyll OR phytoplankton OR "plankton flora")	
Scopus	14 Jan. 2013	1,210	Title, abstract, keywords	(lake* OR reservoir* OR pond* OR fresh*water) AND fish* AND (trophic OR cascad* OR food*web OR top*down OR bottom*up OR resuspen* OR "stable state*" OR bistable OR "regime shift*") AND (water*quality OR transparency OR clarity OR turbid* OR secchi OR "suspended solids" OR phosph* OR nitrogen OR oxygen OR chlorophyll OR phytoplankton OR "plankton flora")	
Web of Science	14 Jan. 2013	1,526	Topics	(lake* OR reservoir* OR pond* OR fresh\$water) AND fish* AND (trophic OR cascad* OR food\$web OR top\$down OR bottom\$up OR resuspen* OR "stable state*" OR bistable OR "regime shift*") AND (water\$quality OR transparency OR clarity OR turbid* OR secchi OR "suspended solids" OR phosph* OR nitrogen OR oxygen OR chlorophyll OR phytoplankton OR "plankton flora")	
Search engines	Date	No. of potentially relevant studies not already found in publication databases		Search string	Comments
Google	4 Feb. 2013	2		(lake OR reservoir OR pond OR freshwater) (biomanipulation OR manipulated) (planktivorous OR planktivore OR benthivorous OR benthivore OR piscivorous OR piscivore)	100 most relevant hits checked (total no. 22,800)
Google Scholar, primary search string	4 Feb. 2013	11		(lake OR reservoir OR pond OR freshwater) (biomanipulation OR manipulated) (planktivorous OR planktivore OR benthivorous OR benthivore OR piscivorous OR piscivore)	100 most relevant hits checked (total no. 5,420)
Google Scholar, secondary search string	4 Feb. 2013	1		(lake OR reservoir OR pond OR freshwater) (fish) (trophic OR cascade OR "food web" OR top-down OR bottom-up) ("water quality" OR transparency OR secchi OR phosphorus OR nitrogen OR chlorophyll OR phytoplankton)	100 most relevant hits checked (total no. 320,000)
Growyn	4 Feb. 2013	0		(lake OR reservoir OR pond OR freshwater) (biomanipulation OR manipulated) (planktivorous OR planktivore OR benthivorous OR benthivore OR piscivorous OR piscivore)	100 most relevant hits checked (total no. 8,130)
Scirus	4 Feb. 2013	3		(lake OR reservoir OR pond OR fresh*water) (biomanipulat* OR manipulat*) (planktivor* OR benthivor* OR piscivor*)	100 most relevant hits checked (total no. 9,563)

Specialist websites (both general search functions and publication search facilities used, if available)	Date	No. of potentially relevant studies not already found using databases or search engines		Search string	Comments
Broads Authority, UK	12 Apr. 2013	1		biomanipulat* OR planktivor* OR benthivor* OR piscivor*	
Danish Centre for Environment and Energy	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR lake OR fish	
Environment Canada	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
European Commission Joint Research Centre	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
European Environment Agency	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Finland's environmental administration	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
International Union for Conservation of Nature	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
IVL Swedish Environmental Research Institute	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Leibniz Institute of Freshwater Ecology and Inland Fisheries, IGB, Germany	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
National Institute for Public Health and the Environment (RIVM), Netherlands	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Netherlands Institute of Ecology	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Norwegian Institute for Water Research (NIVA)	5 Feb. 2013	1		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Swedish Agency for Marine and Water Management	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Swedish County Administrative Boards	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Swedish Environmental Protection Agency	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
Swedish River Basin District Authorities	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
UK Environment Agency	12 Apr. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
United Nations Environment Programme	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated OR planktivorous OR benthivorous OR piscivorous	
United States Environmental Protection Agency	5 Feb. 2013	0		biomanipulation OR biomanipulate OR biomanipulated	
4 articles in English added as a result of stakeholder contacts or Google searches for the names of known biomanipulated lakes.					
2 articles provided by Ellen Van Donk.					

Searches for literature in Danish					
Publication database	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
Forskningsdatabasen.dk	24 Feb. 2013	4		biomanipulation, opfiskning, skidtfisk, fredfisk, sørestaurering	Separate search for each search term
Search engines	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
Google	24 Feb. 2013	2		biomanipulation OR opfiskning OR skidtfisk OR fredfisk OR sørestaurering	100 most relevant hits checked (total no. 86,200)
Google Scholar	23 Feb. 2013	7		opfiskning OR sørestaurering OR skidtfisk OR fredfisk	100 most relevant hits checked (total no. 226)
Scirus	23 Feb. 2013	1		opfiskning OR sørestaurering OR skidtfisk OR fredfisk	80 hits
Specialist websites	Date	No. of potentially relevant studies not already found in other sources			Comments
Aarhus University	4 March 2013	6			Publications authored by Erik Jeppesen and Martin Søndergaard
Center for sørestaurering	24 Feb. 2013	1			All publications checked
17 articles in Danish added as a result of Google searches for the names of known biomanipulated lakes.					
7 more articles in Danish provided by Christian Skov.					
Searches for literature in Dutch					
Publication database	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
PiCarta	22 Jan. 2013	3		biomanipulatie OR "actief biologisch beheer"	
Search engine	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
Google Scholar	22 Jan. 2013	0		biomanipulatie OR "actief biologisch beheer"	
2 more articles in Dutch provided by Ellen Van Donk.					

Searches for literature in Swedish					
Publication databases	Date	No. of potentially relevant studies not already found in other sources	Type of search	Search string	Comments
Libris	10 Feb. 2013	4	Research publications	biomanipulering, biomanipulation, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
SwePub	10 Feb. 2013	3		biomanipulering, biomanipulation, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
Search engines	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
Google	10 Feb. 2013	4		biomanipulering OR reduktionsfiske OR sjörestaurering	100 most relevant hits checked (total no. 5,520)
Google Scholar	10 Feb. 2013	2		biomanipulering OR reduktionsfiske OR sjörestaurering	72 hits
Growyn	10 Feb. 2013	0		biomanipulering OR reduktionsfiske OR sjörestaurering	100 most relevant hits checked (total no. 1,510)
Scirus	10 Feb. 2013	0		biomanipulering OR reduktionsfiske OR sjörestaurering	44 hits
Specialist websites	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
IVL Swedish Environmental Research Institute	10 Feb. 2013	0		biomanipulering, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
Swedish Agency for Marine and Water Management	10 Feb. 2013	0		biomanipulering, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
Swedish County Administrative Boards	10 Feb. 2013	0		biomanipulering, reduktionsfiske, sjörestaurering, utfiskning	In "Publikationer", separate search for each search term
Swedish Environmental Protection Agency	10 Feb. 2013	0		biomanipulering, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
Swedish River Basin District Authorities	10 Feb. 2013	0		biomanipulering, reduktionsfiske, sjörestaurering, utfiskning	Separate search for each search term
6 more articles in Swedish added as a result of stakeholder contacts or Google searches for the names of known biomanipulated lakes.					
Other searches					
Review bibliographies		No. of potentially relevant studies not already found in other sources			Comments
Benndorf (1987): <i>Food web manipulation without nutrient control: A useful strategy in lake restoration?</i>		0			
Benndorf (1990): <i>Conditions for effective biomanipulation; conclusions derived from whole-lake experiments in Europe</i>		0			
Benndorf & Miersch (1991): <i>Phosphorus loading and efficiency of biomanipulation</i>		0			

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Search update					
Publication database	Date	No. of potentially relevant studies not already found in other sources	Type of search	Search string	Comments
Web of Science, primary search string	26 Oct. 2013	7	Topics	lake* OR reservoir* OR pond* OR fresh\$water) AND (*manipulat* OR remov* OR restor* OR stock* OR introduc* OR reduc* OR addition) AND (*planktivor* OR *benthivor* OR cyprinid* OR piscivor* OR "predatory fish*" OR Rutilus OR Abramis OR Esox OR Perca OR Stizostedion OR Micropterus OR Dorosoma OR Coregonus OR Oncorhynchus OR Salmo OR roach OR bream OR pike OR muskellunge OR perch OR pike\$perch OR zander OR sander OR "*mouth bass" OR whitefish OR cisco OR minnow OR "gizzard shad")	Searched for articles published in 2012 and 2013
Web of Science, secondary search string	26 Oct. 2013		Topics	(lake* OR reservoir* OR pond* OR fresh\$water) AND fish* AND (trophic OR cascad* OR food\$web OR top\$down OR bottom\$up OR resuspen* OR "stable state*" OR bistable OR "regime shift*") AND (water\$quality OR transparency OR clarity OR turbid* OR secchi OR "suspended solids" OR phosph* OR nitrogen OR oxygen OR chlorophyll OR phytoplankton OR "plankton flora")	Searched for articles published in 2012 and 2013
Search engine	Date	No. of potentially relevant studies not already found in other sources		Search string	Comments
Google Scholar	10 Nov. 2013	1		(lake OR reservoir OR pond OR freshwater) (biomanipulation OR manipulated) (planktivorous OR planktivore OR benthivorous OR benthivore OR piscivorous OR piscivore)	Searched for articles published since 2012. 100 most relevant hits checked (total no. 539).